

ABSTRACT

The invention relates to a selection method of an *Escherichia coli* mutant strain which expresses an exogenous gene at a high level, wherein stress resistance such as hydrogen peroxide decomposition activity is used as an index, the *Escherichia coli* mutant strain selected thereby and production methods of enzyme using the strain and of useful compounds like amino acids (especially L-amino acid) and the like using the strain.

According to the selection method of the invention, an *Escherichia coli* mutant strain where gene expression amount does not decrease with passage can be obtained, and a compound using a plant-derived ammonia lyase can be efficiently produced.